

REPORT DOCUMENTATION PAGE			Form Approved OMB No. 0704-0188		
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1. REPORT DATE (DD-MM-YYYY) 10-30-2014		2. REPORT TYPE FINAL		3. DATES COVERED (From - To)	
4. TITLE AND SUBTITLE Promoting Agriculture Development for Social Stability in Myanmar		5a. CONTRACT NUMBER			
		5b. GRANT NUMBER			
		5c. PROGRAM ELEMENT NUMBER			
6. AUTHOR(S) Jeffrey R. Izzo Paper Advisor: Prof. Eric Shaw		5d. PROJECT NUMBER			
		5e. TASK NUMBER			
		5f. WORK UNIT NUMBER			
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Joint Military Operations Department Naval War College 686 Cushing Road Newport, RI 02841-1207		8. PERFORMING ORGANIZATION REPORT NUMBER			
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)		10. SPONSOR/MONITOR'S ACRONYM(S)			
		11. SPONSOR/MONITOR'S REPORT NUMBER(S)			
12. DISTRIBUTION / AVAILABILITY STATEMENT Approved for public release; Distribution is unlimited.					
13. SUPPLEMENTARY NOTES A paper submitted to the Naval War College faculty in partial satisfaction of the requirements of the Joint Military Operations Department. The contents of this paper reflect my own personal views and are not necessarily endorsed by the NWC, the Department of the Navy.					
14. ABSTRACT Myanmar is set to make a dramatic economic transition if current reforms take hold and the Government of the Union of Myanmar (GOUM) undertakes additional economic reforms. This will translate into dramatic changes for Myanmar's currently underperforming agriculture sector. While this transition will lead to greater agricultural output, employment, and enhanced food security, not all areas of Myanmar will reap these benefits unless the GOUM pursues balanced policies designed to mitigate the potential negative impacts on smallhold farmers in the country's remote ethnic regions. Failure to do so could result in increased food insecurity and ethnic tensions between these underserved ethnic states and the GOUM contributing to a general overall decrease in social stability. As a compliment to pursuing its agro-industrialization policy for key cash crops, the GOUM should focus on assisting smallhold farmers with increasing their output of high-value crops in the remote hilly areas of Rakhine, Chin, Kachin, and Shan states. The USG and the international donor community can assist the GOUM through targeting its development assistance accordingly and advocating for the GOUM to do the same. A possible initiative could be to employ a Public Private Partnership (P3) for Vertical Coordination (VC) in these remote regions.					
15. SUBJECT TERMS Agriculture, Poverty Alleviation, Social Stability, Myanmar, Smallhold Farmers, Ethnic Minorities, Food Security.					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES XX	19a. NAME OF RESPONSIBLE PERSON Chairman, JMO Dept
a. REPORT UNCLASSIFIED	b. ABSTRACT UNCLASSIFIED	c. THIS PAGE UNCLASSIFIED			19b. TELEPHONE NUMBER (include area code) 401-841-3556

**NAVAL WAR COLLEGE
Newport, R.I.**

Promoting Agriculture Development for Social Stability in Myanmar

by

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FS-01 Foreign Service Officer

A paper submitted to the Faculty of the Naval War College in partial satisfaction of the requirements of the Department of Joint Military Operations.

The contents of this paper reflect my own personal views and are not necessarily endorsed by the Naval War College, the Department of the Navy, or the Department of State

Signature: _____

30 October 2014

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Paper Abstract

Myanmar is set to make a dramatic economic transition if current reforms take hold and the Government of the Union of Myanmar (GOUM) undertakes additional economic reforms. This will translate into dramatic changes for Myanmar's currently underperforming agriculture sector. While this transition will lead to greater agricultural output, employment, and enhanced food security, not all areas of Myanmar will reap these benefits unless the GOUM pursues balanced policies designed to mitigate the potential negative impacts on smallhold farmers in the country's remote ethnic regions. Failure to do so could result in increased food insecurity and ethnic tensions between these underserved ethnic states as well as the GOUM contributing to a general overall decrease in social stability. As a compliment to pursuing its agro-industrialization policy for key cash crops, the GOUM should focus on assisting smallhold farmers with increasing their output of high-value crops in the remote hilly areas of Rakhine, Chin, Kachin, and Shan states. The USG and the international donor community can assist the GOUM through targeting its development assistance accordingly and advocating for the GOUM to do the same. A possible initiative could be to employ a Public Private Partnership (P3) for Vertical Coordination (VC) in these remote regions.

Introduction

The purpose of this paper is to identify priority regions in Myanmar for USG assistance programs and advocacy efforts in order to help the Government of the Union of Myanmar (GOUM) maximize social stability in key rural regions. During Myanmar's economic transition, the development of the agriculture sector will be the best way to rapidly increase rural employment, reduce overall poverty, and enhance food security. As compared to its regional peers, Myanmar is arriving late to an economic transition toward a more open economy less dominated by the state. While Myanmar's agriculture sector shares many of the same characteristics with regional peers like Vietnam, to which it is often compared, it will nonetheless face added challenges. These added challenges when combined with the historical progression of a liberalizing Asian agriculture sector will create dislocations and negative impacts that will fall disproportionately on Myanmar's smallholder farmers in the remote border states of Rakhine, Chin, Kachin, and Shan states where ethnic tensions with the central government run high and where food insecurity is at its highest.¹ The GOUM's rural development strategy is focusing on the removal of constraints to agriculture production and marketing with a focus on rural development of small to medium farm and non-farm enterprise.² However, for practical and political reasons it will likely first deploy this strategy in the rural areas closer in to the major urban centers of Yangon, Nay Pyi Taw, and Mandalay, which are largely inhabited by ethnic Burmese populations. Moreover, GOUM and donor agriculture assistance programs and extension services are focused on Myanmar's major exporting crops of rice and pulses for which the remote border regions are climatically ill-suited to grow.³ The concern for both Myanmar and the USG should be that the normal economic dislocations associated with a liberalizing agriculture sector coupled with specific

characteristic of Myanmar could increase social instability in the remote poorer regions that already have ethnic armed organizations (EAOs)⁴ Therefore, USG interagency agriculture development assistance and advocacy efforts should focus on increasing agriculture outputs and supply chain linkages of high value food crops in the states largely inhabited by underserved ethnic minorities in order to maximize social stability in Myanmar.

Agriculture Sector Performing Below Potential

Myanmar's agriculture sector is performing well below its potential both in terms of output and poverty alleviation. Roughly 18 percent of Myanmar's 676,578 square kilometer area is used for agriculture, or 12.4 million hectares (ha), with an additional estimated 5.7 million ha considered cultivable. Of this area, only 2.2 million ha is equipped for irrigation. Over 1000 cubic kilometers of fresh water flows through Myanmar each year, of which only 33 cubic kilometers in total is used.⁵ According to the Asian Development Bank (ADB), the economy is predominantly agricultural but only accounts for about 32 percent of GDP and 17 percent of official exports (2011).⁶ ADB estimates that 70 percent of the country's labor force is employed in agriculture. Almost two thirds of the land under cultivation is sown with rice, Myanmar's largest crop produced by unit and value. The next largest food crop produced by unit is fresh vegetables, followed by pulses (dried beans), corn, fresh fruit, groundnuts, onions, and garlic. Myanmar also produces lesser amounts of oil crops (Palm oil, sesame, sunflower), wheat, cocoa, coffee, and other cereals. Although rice is by far and away the highest value crop produced, almost all of it goes to meet internal consumption with less than 5000 tons exported in 2011, despite it being a major rice exporter in the 1960s and 1970s.⁷ Accordingly, every economic analysis, policy paper, and strategy for the development of Myanmar's agriculture sector notes the significant potential for Myanmar to

once again become a major rice exporter and recommends that the GOUM prioritize rice in its agriculture. This is a sound policy and one that the GOUM is pursuing through market liberalization, increased research and development on higher quality rice varieties, and through the use of private sector vertical coordination ventures. However, Myanmar has a diverse climate with several different zones. The mountainous border states, where most of the ethnic minorities are located, are not suitable for growing rice without major investments in improved irrigation. Given its limited capacity and funding, the GOUM is unlikely to make such investments in these remote areas, preferring instead to prioritize improving production in those areas climatically more suited to rice production. For the sake of social stability, attention must be paid to Myanmar's underserved outlying areas whose climate is not optimized for growing rice.

Myanmar has five major topographic and climatic zones: the Mountainous Region (in the north and west), the Shan Plateau (in the east), the Central Dry Zone, the Delta Region (Ayeyarwady River), and the Coastal Region. Most of Myanmar's population is located in the Central Dry Zone and Delta Region. The Central Dry Zone has a mix of agriculture and is where most of the oilseed crops are grown, although production is insufficient to meet demand. With greater irrigation the Central Dry Zone could become more productive in a range of crops including rice and pulses, hence it is a major area of focus for the GOUM. The Delta and Coastal Regions have the highest average rainfall and are where half of Myanmar's rice is grown. These two climatic zones also grow pulses and oilseeds.⁸ The Mountainous Region and Shan Plateau include the least densely populated parts of Myanmar and are characterized by sloped, hilly land with less productive soil and moderate to heavy rainfall. Crops in these two climatic regions are a mix of chilies, vegetables, orchards, fruit

trees, upland crops (maize, wheat, and other cereals) and plantation crops such as coffee.⁹

The Mountainous Region climatic zone includes the upland parts of Rakhine, Chin, and Kachin states, while the Shan Plateau climatic zone consists of north, east, south, and west Shan state. These hilly areas are also characterized by smaller sized and mostly subsistence based farms, as well as higher levels of poverty.

There are significant differences in the type and character of farm structure between the remote hilly regions of Rakhine, Chin, Kachin, and Shan states and the coastal and delta regions. A much higher percentage of farmers in these hilly regions are smallhold farmers farming five acres or less. According to the Livelihood and Food Security Trust Fund (LIFT) 2012 Baseline Survey, 63 percent of respondents in the hilly regions of these four states were smallhold farmers and 26 percent had no land at all. In contrast, 37 percent of the low-land dry region and 7.4 percent of the delta/coastal region respondents were smallhold farmers, while the incidence of landlessness was considerably higher at 42.6 and 72.1 percent respectively.¹⁰ Although the dry and delta/coastal regions have higher incidence of landlessness, a twice as high percentage of these landless work as casual agriculture labor, owing to the higher agricultural production and generally larger size farms of these areas.¹¹ Additionally, the percentage of smallholder farms employing casual labor was twice as much for the dry and delta/coastal respondents as for the hilly area respondents.¹² LIFT data also showed that there was no appreciable difference in income between farmers holding less than two acres and the rural landless. These groups also had higher incidences of food insecurity.¹³

An FAO food security assessment identified several priority areas where food insecurity was greatest in Myanmar: Chin state, northern Rakhine state, north and east Shan

state, and Kachin state.¹⁴ By the numbers, Myanmar produces enough food to supply its people and export some rice and large quantities of beans to external markets. However, due crop production and distribution challenges throughout Myanmar, 10 percent of its population is below the official Food Poverty Line. The FAO mission noted that access to adequate food supplies were uneven and varied widely among states: “However there are important differences between states/divisions, with a very high [food] poverty level in Chin state (40 percent) and a high [food] poverty level in northern Shan state (21 percent) and eastern Shan state (20 percent).”¹⁵ The assessment mission also noted acute food insecurity in northern Rakhine state, and Chin states (the poorest state in Myanmar), as well as chronic food insecurity in the rest of Rakhine, Kachin, and northern Shan states.¹⁶ These variations in access to food, either grown or purchased, are the result of complex cultural and social factors, options for employment, government policies, and agriculture production potential across regions.¹⁷

Production and per hectare yield trends of Myanmar’s top five food crops (by quantity) over the twenty year period ending in 2012 indicate that the GOUM may be able to enhance food security and incomes in these remote border regions through an increased focus on fruits and vegetables, a high-value crop the production of which is concentrated in these areas. Of Myanmar’s top five crops produced in 2012, rice doubled in output and increased its per hectare yield by a half a metric ton per hectare (MT/ha), Bean (dry) production increased by a factor of ten (vaulting Myanmar to the number one global producer of dried beans) while the yield more than doubled to 1.4 MT/ha. Maize production increased by a factor of seven, while the yield more than doubled to 3.61 MT/ha. This is likely a result of the increased global demand for maize as feed for livestock and as a biofuel. In contrast to

the productivity gains in these three crops, fruit production doubled with no change in the per hectare yield, while vegetable production almost doubled but showed only a marginal increase in yield going from 13 MT/ha to 14.2 MT/ha.¹⁸ Global demand has likely driven productivity increases for beans, and maize (beans are by far and away Myanmar's number one export crop by quantity and value.¹⁹), while internal food security issues have spurred the increase in rice production. However, the implied increases in incomes and social welfare for farmers commensurate with these dramatic increases have not been shared by smallhold farmers in the remote hilly regions of Rakhine, Chan, Kachin, and Shan states, as these states grow disproportionately smaller quantities of these products. According to the UN, the social welfare in these remote areas remains critical despite the improvements in agriculture output.²⁰

The IMF ranks Myanmar as one of the poorest countries the world (161 out of 180.)²¹ Exact figures on poverty are hard to come by. The ADB estimates that 26 percent of the population lives under the poverty line (calculated as minimum necessary caloric and non-food expenditures.)²² The International Fund for Agricultural Development (IFAD) notes that the incidence of rural poverty is "significantly higher," 29 percent versus 15 percent, while "the rural poor typically consist of the landless (from 35 to 53 per cent of the rural population depending on the area), farmers with access to small and marginal landholdings (usually less than two hectares each), and ethnic groups."²³ Most of the poor live in the central dry zone (where soils are sandy, rainfall low and population density high) and in the hilly regions populated by ethnic groups, which are remote, have limited arable lands and have been affected by conflict. As a result, "both poverty and food poverty in a number of rural regions/states are considerably higher than the national average of 26

percent: for instance, poverty in Chin state is 73 percent, east Shan 46 percent, Rakhine state 44 percent, north Shan 37 percent and Tanintharyi region 33 percent.”²⁴

Structural and Policy Constraints Limit Higher Production and Incomes

The numerous and complex structural and policy constraints that inhibit the agriculture sector’s potential are easily identifiable and follow the same pattern as other transition/developing agriculture economies. These constraints have also contributed to Myanmar’s high rates of hunger and malnutrition: a highly skewed distribution of land with the high rates of landlessness noted above, underinvestment in agricultural research, weak extension services, lack of widespread irrigation, lack of credit available to farmers, high transportation costs due to poor infrastructure and tolls, weak land tenure rights, lack of price and other information, weak market linkages between suppliers and demand, high cost for farm inputs such as fertilizer, and an appreciating exchange rate.²⁵ While these constraints are evident throughout Myanmar, many of them impact the remote hilly regions more severely, such as lack of irrigation, transportation, and market information infrastructures.

The GOUM is addressing these constraints through several interlinked policy programs such as the Poverty Alleviation and Rural Development Action Plan (PARDAP), the National Comprehensive Development Plan (NCDP), the Framework for Economic and Social Reform (FESR), and the Strategic Framework for Rural Development (SFRD). Specific initiatives under these various programs as they relate to agriculture have not been published. However, in broad strokes the GOUM is focusing on maximizing market share in regional and global markets for the key cash crops of rice and beans.²⁶ It will also focus on alleviating food insecurity and poverty reduction in rural areas by, inter alia, developing efficient supply chains and industry clusters, reforming land tenure and SME laws and

regulations, attracting foreign investment, continuing to expand road networks and irrigation infrastructure, expanding access to credit, expanding research and development of high-yielding seeds, and improving and expanding extension services.^{27 28} With Myanmar's democratic reforms under President Thein Sein and the clearing of over \$400 million in arrears to the World Bank, several multilateral and bilateral donor organizations have resumed assisting, or have announced plans to assist, the GOUM in deploying its agriculture and rural development strategies. Those organizations most directly contributing to the development of the agriculture sector include LIFT, a multi-donor trust fund, the World Bank, the ADB, the UK's Department for International Development (DFID), Australia's AusAID, and USAID both directly and through LIFT. These organizations have committed over \$200 million in total for targeted assistance in agriculture and improving food security. Many other multi-lateral and bilateral donor agencies have committed to projects that will indirectly impact agriculture development such as infrastructure and micro-finance.²⁹

Negative Impacts of Myanmar's Transition on Smallholder Farmers

The liberalization experiences of previously closed Asian agriculture economies like Vietnam, China, and the Philippines predict in broad strokes the impact that Myanmar's transition will have on its agriculture sector. Not all of these impacts were positive, and as in any liberalization there were winners and losers. In the context of Myanmar, through extrapolation of certain economic characteristics specific to Myanmar today, it is likely that the inevitable negative impacts of this type of economic transition will be disproportionately felt by smallhold farmers in the poor mountainous border states noted above that are largely inhabited by ethnic minorities.

All things being equal, economic and trade liberalization ultimately increase agriculture output and food security. This process begins in the trade sector, where the economy in question lowers tariffs on imports or otherwise removes other non-tariff trade barriers. This reduces the cost of imported inputs like pesticides, seeds, farming equipment, irrigation equipment, etc. Concurrent with trade liberalization, many Asian rice economies in the 1970s and 1980s increased the use of high-yield and high quality seed rice strains—the so-called Green Revolution. So as barriers to imports lowered and the level of agriculture science and technology increased, the cost of production came down while the level of production rose. This immediately led to falling producer prices, which had both positive and negative effects depending on if one was a producer or consumer.

In response, farmers were incentivized to produce more to overcome this negative price effect that nevertheless helped increase food security to landless households by reducing the cost of food while increasing the supply. Farmers could increase production in two basic ways: put more land under cultivation, and thereby absorb some excess labor from landless households (a good thing,) or become more productive through mechanization and/or consolidation of farms for greater economies of scale. It is worth noting here that the process of farm mechanization ultimately reduces the labor needed per hectare under cultivation, which may not lead to a reduction in rural unemployment. When Asian rice economies began this transition they were dominated by smallholder farms, with limited access to credit. Consequently, they put more land under cultivation and thereby reduced rural unemployment while raising incomes for both farmers and laborers, which again increased food security. Inevitably a process of agro-industrialization set in where small family farms consolidated into commercial ventures (as foreign investment in the sector

increased due to liberalization), and became more integrated with the retail sector as vertical coordination increased.³⁰ Those smallhold farmers who could not compete, either sold their land and moved to urban and peri-urban areas to find employment in other sectors, or remained in the area but transitioned to employment in the non-farm industries, which saw a rise in the demand for non-farm labor due to the increase in agriculture production (i.e. storage, transportation, processing, provision of inputs, etc.) The rising incomes and concurrent urbanization of transition economies positively impacted some rural farmers through a change in consumption patterns of city-dwellers from food staples like rice and cassava, to higher value products like fruit and vegetables, which also had a positive income effect on rural farmers.³¹ Although it was more complex and hardly uniform across all countries or regions, the general Asian liberalization experience witnessed rising rural incomes for those employed in the agriculture and related non-farm sectors, with a concurrent increase in food security and food self-sufficiency for Asian nations as a whole. However, this adjustment process was not painless for all farmers, and it also increased tensions within these transition economies.

Several of the structural and policy constraints noted above will make Myanmar's experience distinctly different and negatively impact the smallholders in the remote hilly regions. Aside from the clear geographic and GOUM resource constraints that will limit the development of much needed transportation and irrigation infrastructure in these remote areas, smallholders in Myanmar will likely be unable to acquire more land to put under cultivation in response to falling producer prices due to unclear land tenure laws. Despite enacting the Farmland Law and the Vacant, Fallow, and Virgin Lands Management Laws in 2012 to address Myanmar's lack of a written policy on land use and land tenure, it is not

clear what effect these laws will have on Myanmar's preexisting and antiquated body of land tenure law.³² As a result of this lack of written policies, smallholders whose land use does not comply with GOUM land classifications are at risk of losing what little land they do have.³³ According to the LIFT Baseline Survey, smallholders do have access to limited credit, but rarely use it to purchase land presumably due to the low amounts borrowed and weak tenure rights.³⁴ Finally, available evidence indicates that farming inputs are going up in Myanmar, not down. Fertilizer is becoming more expensive due to the GOUM's preference of selling natural gas for export vice its use in fertilizer production. A rising exchange rate due to increased oil and gas production, coupled with inflation caused by structural constraints (i.e. limited port facilities impacts import prices, long lines of transportation to remote areas raises acquisition costs,) are also negatively impacting farmers use of inputs.³⁵ This market failure of higher input costs (land, fertilizer, equipment, etc.) in the face of decreasing producer prices provide smallholders in the remote hilly regions with little incentive to expand their production beyond subsistence levels. This in turn will negatively impact local food security and social stability.

Some of these smallholders under pressure from lower producer prices will attempt to increase the frequency of crops grow on what little land they have without increasing the use of fertilizer. This will ultimately lead to a collapse in the fertility of the soil and output. Other uncompetitive smallholders will simply leave these remote areas and move to urban areas looking for work. This could result in an increase in tensions between these ethnic minorities and the largely Burman populations in the major cities of Yangon, Nay Pyi Taw, and Mandalay. However, this impact will likely be small if the economies of these cities continue to expand and are thus able to absorb the amount of rural migrants. A more

problematic potential impact will be the women left behind to farm the subsistence plot and raise the dependents, as it will be the men in these smallholder households who leave to find alternate work.³⁶ Women-led farming households in the developing world tend to have higher rates of poverty. Few remittances may be forthcoming from the men who find work in the urban areas, who would follow an all too familiar pattern of increasing their consumption spending (principally on alcohol, women, and gambling.) The end result is that these remote hilly regions of Chin, Rakhine, Kachin, and Shan states will have an increasing share of households vulnerable to exploitation, particularly by human traffickers. Moreover, these areas are inhabited by ethnic groups long at odds with the central government. There have been periodic skirmishes between Myanmar's military and Chin and Shan ethnic minorities in their respective states over issues of political control. Although the GOUM has recently signed cease-fire agreements with many of these ethnic armed organizations (EAOs), it is currently in open conflict with the Kachin ethnic minorities in Kachin state. The Rohingya Muslims of Rakhine state gained international attention during the 2012 state riots, and the Burman Buddhists have long discriminated against them. The GOUM does not recognize the Rohingya as an official ethnic group of Myanmar, and maintains that they have no claim to Myanmar citizenship. Shan minorities also exist in the Sagaing Region in the northeast, while Mon-Khmer minorities are also present in Shan state.

The concern for the GOUM and the USG should be that if balanced agriculture policies are not pursued, Myanmar could have large, remote and difficult to access hilly areas inhabited by disadvantaged ethnic minorities who are food insecure and exploited by transnational criminal groups, such as non-state terrorist groups. The question then is what

policies and assistance can maximize pro-poor and inclusive growth in these remote regions dominated by smallholder farms?

Limiting the Negative Impacts On Myanmar's Smallhold Farmers

Much study has been given to the questions posed by development of agriculture in transition economies. Not all conclusions reached have been the same, and in fact the conventional wisdom of the best policy approach to developing a country's agriculture potential has changed over time. One conclusion from the available research seems to be clear: agriculture development provides the best opportunity to alleviate rural poverty in developing countries. This is a result of the fact that 75 percent of the world's poor reside in rural areas where agriculture is the dominant economic activity. More specifically (and the LIFT data shows Myanmar is no different here,) poverty is mostly concentrated among the landless and ethnic minorities living in remote rural areas.³⁷ As noted earlier, Myanmar's agriculture sector employs 70 percent of its workforce, so raising those incomes starts with increasing agriculture productivity. The ADB's assessment mission in 2013 concluded that agriculture "...appears to be the only sector in which employment could relatively quickly be expanded nationwide. This is an important consideration, given that about 30 percent of the rural population is landless and has no source of income other than providing labor to the agriculture sector."³⁸ Several studies have shown that increased agriculture productivity reduces poverty directly through increased incomes and lower food costs, and indirectly through stimulating the associated non-farm industries and by providing capital for a country to continue its economic transition up the development ladder. For example, one study noted that a 10 percent increase in total factor productivity would raise the incomes of small-scale farmers by 5 percent, while another study reported that smallholder rice producers in

Cambodia saw an 8.8 percent increase in incomes when productivity increased by 10 percent.³⁹ Other studies have shown a positive link between increases in productivity and increases in the demand for labor, noting that even in the face of mechanization additional labor was required as new varieties and irrigation allowed for double and even triple cropping the land (i.e. growing coffee plants under banana tress).

Regarding smallhold farmers specifically, several studies point to the lack of systematic evidence that they would not share in productivity gains or the greater opportunities and market access that comes with liberalization.^{40 41} Accurate or not in the case of Myanmar, it is clear that its transition will eventually lead to the exit of a significant portion of smallhold farmers.⁴² Some decrease in the number of smallholders is inevitable, however a significant and/or rapid exodus will negatively impact rural food security and stability. The key for Myanmar, given its ethnic and geographic makeup, will be to keep many of those former smallhold farmers in the rural regions where they reside and gainfully employed in the non-farm sector. The best way to manage this is to ensure that this process of consolidation and agro-industrialization is monitored and does not occur too quickly, by not “selling the store” to large foreign investors in order to get production up as quick as possible regardless of the social cost. As Thomas Reardon of Michigan State University and Christopher Barrett of Cornell University point out, this process of agro-industrialization “may accentuate prevailing inequities, deepen poverty among vulnerable subpopulations, or damage the natural environment if not induced and monitored carefully.”⁴³ They argue that rapid industrialization could leave the smallhold farmers and landless behind, as “foreign or domestic commercial firms owned by elites crowd out small-scale rural entrepreneurs.”⁴⁴ Therefore the international donor community should advise and caution the GOUM against

adopting this Wal-Mart-style approach to agriculture development. Donors and supporters should encourage to GOUM to remove any biases against helping smallholders in the outlying states, and instead pursue pro-poor growth policies in every rural region of Myanmar. That said, there is still a fair amount of pessimism over the fate of the smallhold farmer that any reasonable public policy can prevent.

The United Kingdom's Department of International Development (DFID) contrasts the views of smallholder “pessimists” and “optimists:” Pessimists point to the integration and standardization of global food supply chains as an irresistible economic force that many smallhold farmers may not be able to withstand, as they will be ill-equipped to operate within these new frameworks imported from developing countries by foreign commercial investors. As a result, smallholder agriculture will cease to be viable, and governments therefore should not waste resources on preventing this inevitability.⁴⁵ In contrast, the Optimists believe that focusing on smallholders is still a relevant policy goal, and “with the right policies and support, smallholders will innovate and increase productivity, which will directly reduce rural poverty and stimulate wider economic development.”⁴⁶

Given the importance of the GOUM continuing its current positive trajectory on improving human rights for the continued engagement by the international community, and our own regional security concerns, Myanmar cannot afford to be a smallholder pessimist.

Conclusions and Recommendations

The GOUM has much to do in developing its agriculture sector, just in terms of removing the easily identifiable policy and infrastructure constraints (see Appendix A). In the process, the GOUM should be encouraged to remove any biases against assisting the smallholder, in particular the smallholder in the remote regions of Rakhine, Chin, Kachin,

and Shan states. Promoting inclusive pro-poor growth in these restive regions is in the GOUM's best interest, and it is unlikely that this will be done with a singular focus on rapid agro-industrialization for pillar crops such as rice and pulses, for which these key regions are not optimized to grow.

The GOUM can achieve this in part by leveraging the very changes in agriculture that liberalization and globalization will bring. Promoting diversification of smallholder farms into the high-value crops of vegetables and fruit will benefit the environment, promote food security and overall welfare through an expanded diet, and help link these remote regions to the expected growth in demand for these crops within Myanmar. It is unlikely that these target regions will be able to compete in cereal production, either internationally or domestically. Therefore it would be prudent for these remote hilly regions to specialize in these high-value crops for which they already enjoy a comparative advantage, and which yield higher incomes. Although exporting agriculture products for foreign exchange is a valid goal for the sector overall (and one that the GOUM will achieve with rice and pulses), it is important for the GOUM to also realize that poverty alleviation in these remote and poorest regions can and should be attempted through a regional focus. That is, linking these regions with growing demand in other states and the urban centers, especially since these high-value products will not travel well for any great distance anyway. This will raise incomes, absorb excess labor, and help make these restive regions more stable. In fact, engagement and cooperation on agriculture and rural development between the central government and these ethnic areas will likely build trust and certainly alleviate one of the chief complaints of these ethnic states, namely that the central government is not equitable sharing its resources. The question then becomes how can a developing country government

with limited capacity and resources focus on the needful in these remote areas when it will be hard pressed to do so first in the regions closer in?

The GOUM should explore the possibility of a Public-Private Partnership (P3) in vertical coordination for these more remote areas.⁴⁷ Vertical Coordinators (VCs) can offer farmers guaranteed contractual prices, credit for inputs, and extension services in return for specified output at a specified quality. These organizations can fill the gap left behind by Myanmar as it liberalizes its agriculture sector. However there are risks involved. To begin with, they can end up with monopoly power in a given region and may not always have the best interests of the smallhold farmer at heart. More importantly, they prefer to contract with larger farms that have higher capability in order to meet their customers' standards, and in Myanmar's case private VCs may not even want to operate in the restive areas that need to be assisted. However the concept is still valid. A modified VC model might be a better fit. This would be a P3 with a non-profit specifically set up to establish vertical coordination for the remote hilly regions of these four states. The GOUM could institute a small royalty tax on oil and gas production to help fund these non-profit VCs, or require foreign agri-business investors to fund/develop/assist these non-profit VCs as part of a Corporate Social Responsibility requirement (CSR). Alternatively the international oil companies could do the same as part of their CSR. These VCs would set up a storage/processing/distribution facility located in each of these states—ideally it would be on the edge of these remote regions closer to demand centers. Using its seed-money the VCs would provide extension services with these smallholders, input credit, and purchase output under contract. Eventually they may be able to build the capacity of these remote smallholders to the extent that private sector VCs will contract with them. For each smallholder that the non-profit VCs assists, the GOUM

will pay a fee. This fee, coupled with the reasonable profit it generates from the sale of produce will keep the non-profit VC funded.

The USG interagency could assist with developing this VC model, in addition to USAID's current agriculture development efforts. To begin with, the USG should monitor GOUM agriculture, investment, and land tenure policies for bias against smallholders in these remote ethnic regions. The Country Team could also encourage the GOUM to deploy the International Fund for Agricultural Development's Fostering Agricultural Revitalization in Myanmar (FARM) program in these regions once it has been proven in the initial target areas in the central dry zone. PACOM could perhaps provide security awareness training to the NGOs implementing FARM to increase their safety and comfort level of operating in these restive provinces. PACOM could fund extension services training in the United States for both extension workers employed by the GOUM and those working for the non-profit VCs. USTDA could also offer grants for feasibility studies on this proposed VC model and on the facilities it would need to construct. Finally, given the dominant role that the Tatmadaw still plays in Burmese society and the economy of Myanmar, the Defense Attaché's Office (DATT) could work to sensitize the military to the importance of developing Myanmar's agriculture sector for inclusive and pro-poor growth, to include the importance of proper land tenure laws and practices. In concert with the embassy's Public Affair Section, the DATT could fund speakers for military audiences on the importance of agriculture as a development and security tool for Myanmar.

The next decade will be critical for Myanmar's smallholders in these ethnic regions. The donor community needs to help Myanmar overcome its complex geography and ethnic

mosaic so that agriculture development in this transition economy contributes to social stability.

Notes

¹ Food and Agriculture Organization of the United Nations, World Food Program. FAO/WFP Crop and Food Security Assessment Mission to Myanmar. (Rome, Italy. January 2, 2002), Pages 5-7

² Asian Development Bank. “Myanmar: Unlocking the Potential.” 2014 (Mandaluyong City, Philippines: Asian Development Bank, 2014), Page 62, 63

³ While the GOUM has yet to publish detailed agriculture development plans under the 2013 Strategic Framework for Rural Development and where that plan will first be deployed, the International Fund for Agricultural Development (IFAD) has agreed to implement a Fostering Agricultural Revitalization (FARM) program in the capital region of Myanmar, located in the predominantly Burman central dry zone. The World Bank and the multi-donor Livelihood and Food Security Trust Fund (LIFT) are working to scale up the design of the FARM project in the central dry zone as well. International Fund for Agricultural Development (IFAD). “Fostering Agricultural Revitalization in Myanmar (FARM) Final Project Design Report.” 2013 (Rome, Italy: IFAD, 2013), viii-ix.

⁴ Kim Jolliffe. “Ethnic Conflict and Social Services in Myanmar’s Contested Regions.” The Asia Foundation. (Yangon, Myanmar, 2014), 12

⁵ Food and Agriculture Organization of the United Nations. Myanmar. FAOSTAT. Accessed October 19, 2014. <http://faostat.fao.org/site/377/DesktopDefault.aspx?PageID=377#ancor>

⁶ Asian Development Bank. “Myanmar: Unlocking the Potential.” 2014 (Mandaluyong City, Philippines: Asian Development Bank, 2014), 62.

⁷ Food and Agriculture Organization of the United Nations. Myanmar. FAOSTAT. Accessed October 19, 2014. <http://faostat.fao.org/site/666/default.aspx>.

⁸ Asian Development Bank. “Myanmar: Agriculture, Natural Resources, and Environment Initial Sector Assessment, Strategy and Road Map.” 2013 (Mandaluyong City, Philippines: Asian Development Bank, 2013), 3.

⁹ Food and Agriculture Organization of the United Nations, World Food Program. FAO/WFP Crop and Food Security Assessment Mission to Myanmar. (Rome, Italy. January 2, 2002), 40.

¹⁰ Livelihood and Food Security Trust Fund (LIFT). “Baseline Survey Results” 2013 (Yangon, Myanmar: LIFT, 2013), 36.

¹¹ Ibid, 13.

¹² Ibid, 26.

¹³ Ibid, 28-35.

¹⁴ Food and Agriculture Organization of the United Nations, World Food Program. FAO/WFP Crop and Food Security Assessment Mission to Myanmar. (Rome, Italy. January 2, 2002), 5.

¹⁵ Ibid, 26.

¹⁶ Ibid, 28-29.

¹⁷ Ibid, 26.

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- ¹⁸ Food and Agriculture Organization of the United Nations. Myanmar. FAOSTAT. Accessed October 23, 2014. <http://faostat.fao.org/site/567/DesktopDefault.aspx?PageID=567#ancor>.
- ¹⁹ Food and Agriculture Organization of the United Nations. Myanmar. FAOSTAT. Accessed October 19, 2014. <http://faostat.fao.org/site/666/default.aspx>.
- ²⁰ United Nations in Myanmar. United Nations Strategic Framework 2012-2015, United Nations Country Team in Myanmar, (Yangon, 2011), 13.
- ²¹ Asian Development Bank. “Myanmar: Agriculture, Natural Resources, and Environment Initial Sector Assessment, Strategy and Road Map.” 2013 (Mandaluyong City, Philippines: Asian Development Bank, 2013), 2
- ²² Ibid, 2.
- ²³ International Fund for Agricultural Development (IFAD). “Republic of the Union of Myanmar: Country Strategic opportunities Programme.” 2014 (Rome, Italy: IFAD, 2014), 2.
- ²⁴ United Nations in Myanmar. United Nations Strategic Framework 2012-2015, United Nations Country Team in Myanmar, (Yangon, 2011), 13.
- ²⁵ Asian Development Bank. “Myanmar: Agriculture, Natural Resources, and Environment Initial Sector Assessment, Strategy and Road Map.” 2013 (Mandaluyong City, Philippines: Asian Development Bank, 2013), 6.
- ²⁶ Michigan State University (MSU.) Myanmar Development Resource Institute’s Center for Economic and Social Development (MDRI/CESD.) “Strategic Choices for the Future of Agriculture in Myanmar: A Summary Paper.” (East Lansing, July 20, 2013), 6,7,9.
- ²⁷ Asian Development Bank. “Myanmar: Agriculture, Natural Resources, and Environment Initial Sector Assessment, Strategy and Road Map.” 2013 (Mandaluyong City, Philippines: Asian Development Bank, 2013), 6
- ²⁸ Asian Development Bank. “Myanmar: Unlocking the Potential.” 2014 (Mandaluyong City, Philippines: Asian Development Bank, 2014), 63.
- ²⁹ Lex Rieffel, and James, W. Fox. “Too Much, Too Soon?: The Dilemma of Foreign Aid to Myanmar/Burma.” Nathan Associates Inc. (Arlington, Virginia, March 2013), 33-40.
- ³⁰ Miet Maertens and Johan F.M. Swinnen. “Globalization, Privatization and Vertical Coordination in Food Value Chains in Developing and Transition Countries.” Plenary paper for the International Association of Agricultural Economists Conference, (Gold Coast, Australia, August 12-18, 2006), 3-6.
- ³¹ Christopher Barrett and Thomas Reardon. “Agroindustrialization, Globalization, and International Development: An Overview of Issues, Patterns and Determinants.” June 21, 2000, <http://www.iatp.org/documents/agroindustrialization-globalization-and-international-development-an-overview-of-issues--1>, 4.
- ³² USAID. USAID Country Profile Burma: Property Rights and Resource Governance, USAID, (Washington, D.C., 2013), http://usaidlandtenure.net/sites/default/files/country-profiles/full-reports/USAID_Land_Tenure_Burma_Profile.pdf, 1.
- ³³ Ibid, 2.

³⁴ Livelihood and Food Security Trust Fund (LIFT). “Baseline Survey Results” 2013 (Yangon, Myanmar: LIFT, 2013), 62.

³⁵ Asian Development Bank. “Myanmar: Agriculture, Natural Resources, and Environment Initial Sector Assessment, Strategy and Road Map.” 2013 (Mandaluyong City, Philippines: Asian Development Bank, 2013), 13, 15, 36.

³⁶ The LIFT Baseline Survey data shows that smallholder households in the hilly region have on average more dependents than the dry, delta/coastal survey respondents.

³⁷ Department of International Development. Agriculture and Natural Resources Team. “Agriculture, Growth and Poverty Reduction.” (London, United Kingdom: DFID, October 2004), 6-7.

³⁸ Asian Development Bank. “Myanmar: Agriculture, Natural Resources, and Environment Initial Sector Assessment, Strategy and Road Map.” 2013 (Mandaluyong City, Philippines: Asian Development Bank, 2013), 4.

³⁹ Department of International Development. Agriculture and Natural Resources Team. “Agriculture, Growth and Poverty Reduction.” (London, United Kingdom: DFID, October 2004), 10.

⁴⁰ Ibid, 11.

⁴¹ Christopher Barrett and Thomas Reardon. “Agroindustrialization, Globalization, and International Development: An Overview of Issues, Patterns and Determinants.” June 21, 2000, <http://www.iatp.org/documents/agroindustrialization-globalization-and-international-development-an-overview-of-issues--1>, 3.

⁴² Francesco Goletti. Agricultural Diversification and Rural Industrialization As A Strategy for Rural Income Growth and Poverty Reduction in Indochina and Myanmar. Paper prepared for the Symposium on “Food Policy in Indochina and Myanmar: The Effects of Globalization.” (Hanoi, March 1-2, 1999), 5.

⁴³ Christopher Barrett and Thomas Reardon. “Agroindustrialization, Globalization, and International Development: An Overview of Issues, Patterns and Determinants.” June 21, 2000, <http://www.iatp.org/documents/agroindustrialization-globalization-and-international-development-an-overview-of-issues--1>, 1.

⁴⁴ Ibid, 3.

⁴⁵ Department of International Development. Agriculture and Natural Resources Team. “Agriculture, Growth and Poverty Reduction.” (London, United Kingdom: DFID, October 2004), 20.

⁴⁶ Ibid, 21.

⁴⁷ Vertical coordinators (VCs) are essentially private marketing companies who manage the entire supply chain, from field to supermarket or restaurant. They have risen in prominence over the last two decades in response to the liberalization of state-run vertical coordination schemes, and in response to consumer demand for food quality and safety. VCs will contract with farmers to purchase their produce at a guaranteed rate, provide input credit, and extension services.

Bibliography

- Asian Development Bank. "Myanmar: Agriculture, Natural Resources, and Environment Initial Sector Assessment, Strategy and Road Map." 2013. Mandaluyong City, Philippines: Asian Development Bank, 2013.
- Asian Development Bank. "Myanmar: Unlocking the Potential." Mandaluyong City, Philippines: Asian Development Bank, 2014.
- Barrett, Christopher and Thomas Reardon. "Agroindustrialization, Globalization, and International Development: An Overview of Issues, Patterns and Determinants." June 21, 2000, <http://www.iatp.org/documents/agroindustrialization-globalization-and-international-development-an-overview-of-issues--1>
- Department of International Development. Agriculture and Natural Resources Team. "Agriculture, Growth and Poverty Reduction." London, United Kingdom: DFID, October 2004
- Food and Agriculture Organization of the United Nations, Agriculture and Development Economics Division. *Beyond Agriculture?: The Promise of the Rural Economy for Growth and Poverty Reduction, Workshop Synthesis*. Rome, Italy. January 16-18, 2006.
- Food and Agriculture Organization of the United Nations. *Myanmar*. FAOSTAT. Accessed October 19, 2014.
<http://faostat.fao.org/site/377/DesktopDefault.aspx?PageID=377#ancor>
- Food and Agriculture Organization of the United Nations. *Myanmar*. FAOSTAT. Accessed October 23, 2014.
<http://faostat.fao.org/site/567/DesktopDefault.aspx?PageID=567#ancor>
- Food and Agriculture Organization of the United Nations, Roles of Agriculture Project. *Socio-Economic Analysis and Policy Implications of the Roles of Agriculture in Developing Countries: Research Programme Summary Report 2004*. Rome, Italy. 2004.
- Food and Agriculture Organization of the United Nations, World Food Program. *FAO/WFP Crop and Food Security Assessment Mission to Myanmar*. Rome, Italy. January 2, 2002.
- Goletti, Francesco. "Agricultural Diversification and Rural Industrialization As A Strategy for Rural Income Growth and Poverty Reduction in Indochina and Myanmar." Paper prepared for the Symposium on "Food Policy in Indochina and Myanmar: The Effects of Globalization." Hanoi, March 1-2, 1999.

- International Fund for Agricultural Development (IFAD). “Fostering Agricultural Revitalization in Myanmar (FARM) Final Project Design Report.” 2013. Rome, Italy: IFAD, 2013.
- International Fund for Agricultural Development (IFAD). “Republic of the Union of Myanmar: Country Strategic opportunities Programme.” 2014 Rome, Italy: IFAD, 2014.
- Jolliffe, Kim. “Ethnic Conflict and Social Services in Myanmar’s Contested Regions.” The Asia Foundation. Yangon, Myanmar, 2014.
- Livelihood and Food Security Trust Fund (LIFT). “Baseline Survey Results” 2013 Yangon Myanmar: LIFT 2013.
- Maertens, Miet and Johan F.M. Swinnen. “Globalization, Privatization and Vertical Coordination in Food Value Chains in Developing and Transition Countries.” Plenary paper for the International Association of Agricultural Economists Conference, Gold Coast, Australia, August 12-18, 2006.
- Meijerink, G. & P. Rosa. “The Role of Agriculture in Development.” Markets, Chains and Sustainable Development Strategy and Policy Paper, no. 5. Stichting DLO: Wageningen. 2007.
- Michigan State University (MSU.) Myanmar Development Resource Institute’s Center for Economic and Social Development (MDRI/CESD.) “Strategic Choices for the Future of Agriculture in Myanmar: A Summary Paper.” East Lansing, July 20, 2013.
- Sian Kam, Pau and Gert-Jan Stads, “Myanmar.” *ASTI, Agricultural Science and Technology Indicators*, IFPRI and DAR. June 2007.
- TransNational Institute. *Seminar: Ethnic Conflict in Burma/Myanmar: From Aspirations to Solutions*. Burma Seminar Report. Bangkok, November 14-15, 2013. TNI-BCN, Bangkok 2013.
- Reardon, Thomas. “Success Strategies for Poverty-Alleviating Rural Development for Myanmar: Lessons from Asian Experience.” Brief prepared for National Workshop on Rural Development Strategic Framework Agenda. East Lansing, January 2014.
- Rieffel, Lex and Fox, James, W. “Too Much, Too Soon?: The Dilemma of Foreign Aid to Myanmar/Burma.” Nathan Associates Inc. Arlington, Virginia, March 2013.
- United Nations in Myanmar. *United Nations Strategic Framework 2012-2015*, United Nations Country Team in Myanmar, Yangon, 2011.

Appendix A

SWOT Analysis of the Myanmar Food Crop Subsector

Strengths

1. Ample land resources in the most populated parts of the country
2. A population experienced in agriculture and agricultural practices
3. Ample water resources in much of the country
4. Ample labor resources
5. Available markets both domestically and internationally
6. Existing irrigation facilities and the technology to expand and improve irrigation infrastructure
7. A recent commitment to open market policies
8. Overall food self-sufficiency except for isolated regions

Opportunities

1. Investment in rural infrastructure and rural electrification would offset price disincentives.
2. Policy reforms in terms of taxation and land would provide additional production incentives.
3. The completion of partly constructed irrigation schemes can be undertaken at low capital cost.
4. Private sector initiatives in improved production and marketing can be scaled up.
5. Off-farm wage and employment generation potential.

Weaknesses

1. Serious price disincentives at least partially as a result of macroeconomic policies
2. Limited access to needed inputs
3. Limited access to working capital
4. Inadequate physical infrastructure (rural access, storage, processing, marketing, and power)
5. Susceptibility to drought in some areas
6. Incomplete irrigation infrastructure
7. Weak support services (extension, agricultural research, credit)
8. The new Land Law regulations have yet to be defined and implemented; existing land tenure policy does not act as an incentive to increased farm production
9. Difficult terrain and poor soils in large parts of the country, especially in areas inhabited mainly by ethnic minorities
10. Food deficits in areas with poor transport and poor land resources

Threats

1. Failure to address current disincentives could lead to reduced production, increased rural unemployment, and increased landlessness.
2. Absence of regulatory mechanisms for land use and zoning may divert cultivable areas to inappropriate commercial exploitation.
3. Catastrophic climatic events would cause further damage to the subsector; flood protection and salinity intrusion structures damaged during Cyclone Nargis remain unrepaired.
4. Shifting cultivation in upland areas ties farmers to a subsistence existence; damages forest, soil, and

Source: Asian Development Bank.